

Application No. 09/719,024  
Amendment dated July 28, 2003  
Reply to Office action of March 27, 2003  
Docket Number 22727/04080

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the above-identified application:

**Listing of Claims:**

Claims 1 - 6, 10, 11, 14-16, 19, 21, 22 and 24 have been cancelled without prejudice or disclaimer.

C1 7. (currently amended) An isolated, double domain recombinant AL2 gene polynucleotide encoding a modified mutant Begomovirus transcription activator protein, wherein said recombinant polynucleotide is a modified open reading frame of a selected wild-type AL2 gene from a Begomovirus strain, and wherein said mutant Begomovirus transcription activator protein is a mutant form of a corresponding wild-type Begomovirus transcription activator protein expressed by the selected wild-type AL2 gene; said recombinant AL2 gene polynucleotide comprising a first mutation in the open reading frame region which encodes from about amino acid 83 to about amino acid 129 of said the wild-type transcription activator protein, and a second mutation in the open reading frame region which encodes from about amino acid 23 to about amino acid 43 of said the wild-type transcription activator protein, wherein each of said first and second mutations comprises addition to, deletion of, or replacement of one or more amino acids, or a combination thereof.

8. (currently amended) The recombinant AL2 gene polynucleotide of claim 7 wherein said first mutation is in the open reading frame region which encodes from about amino acid 115 to about amino acid 129 of said transcription activator protein.

9. (currently amended) The recombinant AL2 gene polynucleotide of claim 7 wherein said first mutation is a deletion and said modified encoded mutant Begomovirus transcription activator protein encoded by said mutant gene has from one to 20 fewer amino acids than the corresponding wild-type Begomovirus transcription activator protein.

12. (currently amended) The recombinant AL2 gene polynucleotide of claim 7 wherein said second mutation is a deletion and said modified encoded mutant Begomovirus transcription activator protein encoded by said recombinant gene has from one to 20 fewer amino acids than the corresponding wild-type Begomovirus transcription activator protein.

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13. (currently amended) The recombinant ~~AL2 gene~~ polynucleotide of claim 7 wherein said second mutation is a nucleotide substitution of ~~base pairs~~ and said isolated recombinant ~~AL2 gene~~ polynucleotide encodes a modified mutant Begomovirus transcription activator protein in which ~~a plurality~~ one or more of the cysteine residues located in the central region of the corresponding wild-type Begomovirus transcription activator protein are substituted.

17. (currently amended) A vector comprising the ~~mutant recombinant AL2 gene~~ polynucleotide of claim 7.

18. The vector of claim 17 wherein said vector is an Agrobacterium.

20. (currently amended) A transgenic plant comprising the ~~double domain recombinant AL2 gene~~ polynucleotide of claim 7

23. (currently amended) A method of preparing a transgenic plant, comprising

(a) providing a sample from a plant which is a host for a Begomovirus;

(b) transforming said sample with a vector comprising ~~a double domain~~ the recombinant ~~AL2 gene~~ polynucleotide of claim 7; and

generating a plant from said transformed sample of step (b).

24. (new) The recombinant polynucleotide of claim 7, wherein the selected wild-type AL2 gene encodes a protein comprising an acidic domain at amino and a cysteine-histidine domain, and wherein said first mutation is a deletion in the acidic domain and said mutant Begomovirus transcription activator protein has from one to 20 fewer amino acids than the corresponding wild-type Begomovirus transcription activator protein; and wherein said second mutation is a nucleotide substitution and said isolated recombinant polynucleotide encodes a mutant Begomovirus transcription activator protein in which one or more of the cysteine residues located in the cysteine-histidine domain of the corresponding wild-type Begomovirus transcription activator protein are substituted.

25. (new) The recombinant polynucleotide of claim 7, wherein the selected wild-type AL2 gene encodes a protein comprising an acidic domain at amino and a cysteine-histidine domain, and wherein said first mutation is a nucleotide substitution and said isolated recombinant

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polynucleotide encodes a mutant Begomovirus transcription activator protein in which one or more of the hydrophobic or acidic residues located in the acidic domain of the corresponding wild-type Begomovirus transcription activator protein are substituted; and wherein said second mutation is a deletion in the cysteine-histidine domain and said mutant Begomovirus transcription activator protein has from one to 20 fewer amino acids than the corresponding wild-type Begomovirus transcription activator protein.

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<sup>26</sup> 26. (new) The recombinant polynucleotide of claim 7 wherein said first and second mutations are deletions and wherein the encoded mutant Begomovirus transcription activator protein has from one to 40 fewer amino acids than the corresponding wild-type Begomovirus transcription activator protein.

<sup>27</sup> 27. (new) The recombinant polynucleotide of claim 7, wherein said first and second mutations are nucleotide substitutions which encode a mutant Begomovirus transcription activator protein in which one or more of the histidine or cysteine residues located in the cysteine-histidine domain and one of the hydrophobic or acidic residues located in the acidic domain of the corresponding wild-type Begomovirus transcription activator protein are substituted.

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